```
/*

Experiment No. :    03

Statement      : Make a light intensity meter that represent light intensity on 5 LEDs, such that all LEDs would glow for maximum light, no LED would glow for dark condition, and likewise for in between light intensities.

Date of Exp.   :    xx/xx/xxxx

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*/

const int ldrPin = A0;      // Pin connected to the LDR

const int ledPins[] = {2, 3, 4, 5, 6}; // Pins connected to the 5 LEDs

void setup() {

// Set up LED pins as outputs

for (int i = 0; i < numLeds; i++) {

pinMode(ledPins[i], OUTPUT);

}

Serial.begin(9600);  //  Initialize  serial  communication  for debugging

}

void loop() {

// Read the analog value from the LDR

int ldrValue = analogRead(ldrPin);


// Map the LDR value to the range of LEDs (0 to numLeds - 1)

int ledLevel = map(ldrValue, 0, 1023,0,numLeds);
```
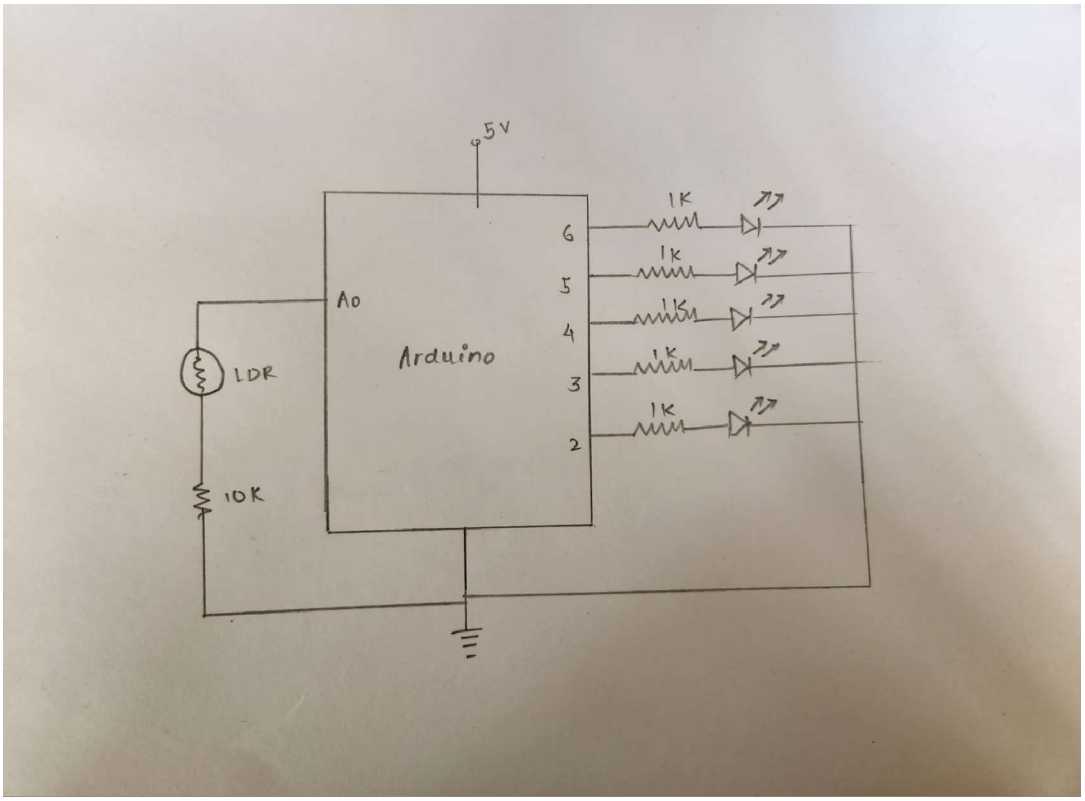

```
// Display the light intensity on the LEDs
displayLightIntensity(ledLevel);

// Print the LDR value and LED level to the serial monitor (optional)
Serial.print("LDR Value: ");
Serial.print(ldrValue);
Serial.print(" | LED Level: ");
Serial.println(ledLevel);
delay(500); // Adjust the delay as needed
}
void displayLightIntensity(int level) {
// Turn off all LEDs
for (int i = 0; i < numLeds; i++) {
digitalWrite(ledPins[i], LOW);
}
// Turn on LEDs up to the specified level
for (int i = 0; i <= level; i++) {
digitalWrite(ledPins[i], HIGH);
}

}
```


5V
1K
1k
1K
1K
1K
6
5
4
3
2
A0
Arduino
LDR
10K